Jan. 7,1997

Acting Secretary
William Caton
Federal Communications Commission
Room 222
1919 M St. NW
Washington, D. C. 20554

RE: CC Docket No. 96-45

Dear Mr. Caton:

Enclosed are an original and four copies of the reply of the University of Alaska Anchorage and Providence Health Systems in Alaska, founding members of the *Alaska Telemedicine Project*, in response to the Public Notice (DA 961981) released November 18, 1996, by the Common Carrier Bureau seeking comments on the Recommendation Decision of the Universal Service Joint Board.

Sincerely,

Frederick W. Pearce, Ph.D.
Dir., Applied Sciences Laboratory
University of Alaska Anchorage

Summary

Members of the *Alaska Telemedicine Project*, the University of Alaska Anchorage and Providence Health Systems in Alaska, support the recommendations of the Joint Board on universal service issues with the following comments:

a) The 110,000 people of "bush" and rural Alaska do not provide the kind of market incentives associated with the principle of competition for telecommunications services articulated in the Telecommunications Act of 1996.

b) At this time, many sites in "bush" and rural Alaska, and especially the health care clinics, do not have internet service and are limited to local dial-up for data. This is costly, especially given the state's satellite backbone, with its associated bandwidth limitations and expenses. Rather than set transmission requirements for advanced services, members of the *Alaska Telemedicine Project* recommend defining advanced services in terms of function: narrow bandwidth clinical applications like e-mail based applications for communications and consultation; image transfer applications like teleradiology and telepathology; and broad band applications like distance education and the distribution of continuing medical and health care education.

c) Members of the Alaska Telemedicine Project believe that the Universal Service provision of the Telecommunications Act of 1996 represents an opportunity for rural health care providers to receive advanced telecommunications services at a discounted rate, and to receive a reasonably comparable level of service, compared to the level of service in Anchorage, Fairbanks, and Juneau, at a reasonably comparable price. Members of the Project believe that the universal service provision of the Telecommunications Act of 1996 is an important step in improving the quality of the delivery of health care services in rural Alaska. However, members of the Project believe that, given Alaska's vast distances, low population

density, and current telecommunications infrastructure, this "discount" mechanism may not be enough to provide residents of Alaska with these advanced services in a timely manner.

Before the
Federal Communications Commission
Washington, D. C. 20554

In the Matter of

Federal-State Joint Board on Universal Service — CC Docket No. 96-45

Comments of the founding members of the *Alaska Telemedicine Project*: The University of Alaska Anchorage (UAA) and Providence Health Systems in Alaska (PHSA)

Founding members of the *Alaska Telemedicine Project*, the University of Alaska Anchorage and Providence Health Systems in Alaska, appreciate the opportunity to file comments in response to the November 18, 1996, Public Notice (DA 96-1891) concerning the Recommended Decision of the Joint Board in CC Docket 96-45.

The founding members of the Alaska Telemedicine Project support the recommendation of the Joint Board in this matter, but with some qualifications.

I. Minimum Standards

Members believe that technical discussions regarding minimum transmission requirements expressed in various quarters, whether ISDN; fractional T-1 connectivity at 128 kbps or 386 kbps; or full T-1 connectivity to rural health care clinics while instructive, elude a major consideration: health care providers and health care educators define their tasks and roles in terms of clinical function. **Health care providers and health care educators want improvement in end-to-end transmission throughput, at a lower cost, so that they might be able to improve the quality of the delivery of health care, especially in rural Alaska.** Members of the *Alaska Telemedicine Project* believe that

Alaska's telecommunications infrastructure must be improved to allow members to send radiology images at affordable prices from all sites in rural Alaska; to perform clinical applications in collaboration between urban and rural health care providers; provide continuing medical and health care education at a distance. Subsidized rates of transmission are an important mechanism for ensuring the acceptance of telehealth technology to facilitate the transformation of the delivery of health care from a transportation-based model to a telecommunications-based model. It must be remembered that clinical applications like dermatology, pathology, and emergency medicine are being performed today in Alaska with very limited bandwidth by adopting e-mail stratagems and other asynchronous narrow bandwidth technologies. Members of the Project recognize the daunting task before the Commission, especially given the current state of Alaska's rural telecommunications infrastructure.

II. Support for Rural Health Care Providers

Members of the *Alaska Telemedicine Project* believe that any increases in the availability of bandwidth in Alaska and to Alaska, and associated decrease in the cost of that transmission capacity, will provide opportunities to transform narrow bandwidth telehealth and health care applications and technologies into broad bandwidth applications and technologies. Medical imaging, currently performed from Old Harbor, a village of 200, 150 air miles from Kodiak using 2.4 kbps dial-up, should demonstrate increased use, speed of transmission, and decreased cost of image transfer with improved bandwidth availability. Members of the Project believe that any discounts for services to rural health care facilities mandated by the Telecommunications Act of 1996 will facilitate the use of current narrow bandwidth telehealth applications and technologies and provide an opportunity to implement broadband technologies and applications that will further improve the quality of the delivery of health care to rural Alaskans.

III. Comparable Services for Health Care Providers

Members of the *Alaska Telemedicine Project* have expressed concern regarding the coming "information highway," precisely because that metaphor is so alien to Alaskans. Without "highways" as they are known in the "lower 48," Alaska is a state with waterways and skyway. Members of the Project believe that in the rush to implement the Telecommunications Act of 1996, with its focus on competition, there will be no true competition in the small regional, rural, and "bush" villages. With a discounting mechanism, community health clinics may be able to afford additional bandwidth and services, but its availability will still be limited by the State's satellite backbone limitations, augmented by construction of fiber "when the market conditions warrant."

Members of the *Alaska Telemedicine Project* believe that rural health care providers deserve a "reasonably comparable level of [telecommunications and information technology] service at a reasonably comparable price..." to those services and prices in Anchorage, Fairbanks, and Juneau. Because of distance, and population density, members of the Project recognize that there is little "market incentive" for telecommunications carriers to compete for service in rural Alaska. Members of the Project endorse the recommendation that contributions to the universal service fund for health care providers be assessed on both interstate and intrastate revenue. While the current level of service in rural Alaska is below that of Anchorage, Fairbanks, and Juneau, the level of pricing in rural Alaska far exceeds the level of service and pricing in Anchorage, Fairbanks, and Juneau. Members of the Project endorse the principle of "universal service" with the attendant assumption that a universal service funding mechanism will improve service and decrease pricing for these services in rural Alaska.

IV. Distance Education and Support for Continuing Medical Education

Health care in Alaska has historically been predicated on transporting patients to centers of health care in the village, the regional "hub," and to Anchorage, and, if necessary, outside the State. Because of its geography, ethnography, and demographics, this is an expensive proposition. The three health care systems in Alaska; Native health services, military health systems, and private health systems spend large sums of money moving patients to facilities.

In addition, these health care organizations have been forced, by the same conditions, to spend enormous amounts of money transporting their health care professionals to Anchorage and outside the State to receive continuing medical education.

The distribution of health care distance delivered education, along with continuing medical education, will improve the quality of health care in rural Alaska. However, given the state's reliance on a satellite backbone, this is limited by bandwidth availability and cost. **These distance education costs should be considered as part of the universal service provision and be subject to the comparable service and pricing principles articulated in Sec. 254.** Providing discounts for distance medical and health care education, so that it may be distributed "where and when it is needed," will enable the University of Alaska Anchorage, Providence Health Systems in Alaska, and other members of the *Alaska Telemedicine Project* to bring health care education and services to the health care providers in rural Alaska with attendant savings in transportation costs.

Conclusion

Members of the *Alaska Telemedicine Project*, the University of Alaska Anchorage and Providence Health Systems in Alaska, support the recommendation of the Joint Board on universal service issues with the following comments:

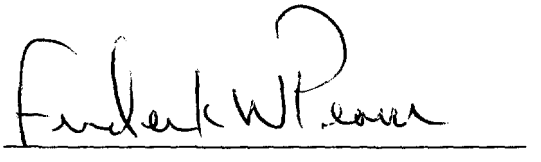
a) The 180,000 people of rural and "bush" Alaska do not provide the kind of market incentives associated with the principle of competition for telecommunications services articulated in the Telecommunications Act of 1996.

b) Many sites in rural and "bush" Alaska, and especially the health care clinics, currently do not have internet service and are limited to local dial-up for data. Because of the state's satellite backbone, with its associated bandwidth limitations, these services are prohibitably costly.

c) Distance education costs should be considered as part of the universal service provision and be subject to the comparable service and pricing principles articulated in Sec. 254.

d) Members of the *Alaska Telemedicine Project* believe that the Universal Service provision of the Telecommunications Act of 1996 represents an opportunity for rural health care providers to receive advanced telecommunications services at a discounted rate. Members of the Project believe that this is an important step in improving the quality of the delivery of health care services in rural and "bush" Alaska. Members of the Project believe that, given Alaska's vast distances, low population density, and current telecommunications infrastructure, this "discount" mechanism may not be enough to prevent Alaska from becoming a telecommunications and information technology wasteland with health care services limited by available bandwidth and remaining unaffordable.

RESPECTFULLY SUBMITTED this 7th day of January, 1997



By: Professor Frederick W. Pearce, Ph.D.
For the Founding Members of the
Alaska Telemedicine Project:
the University of Alaska Anchorage and
Providence Health Systems in Alaska